

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

**(19) World Intellectual Property Organization  
International Bureau**



A standard linear barcode is located at the bottom of the page, spanning most of the width. It is used for tracking and identification of the journal issue.

**(43) International Publication Date  
31 March 2005 (31.03.2005)**

PCT

(10) International Publication Number  
**WO 2005/029878 A3**

(51) International Patent Classification<sup>7</sup> : H04B 7/15.  
H04Q 7/20

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**(21) International Application Number:** PCT/US2004/023781

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**(22) International Filing Date:**  
17 September 2004 (17.09.2004)

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM,

**(25) Filing Language:** English

AI, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,

**(26) Publication Language:** English

**(30) Priority Data:** 60/503,490 17 September 2003 (17.09.2003) US

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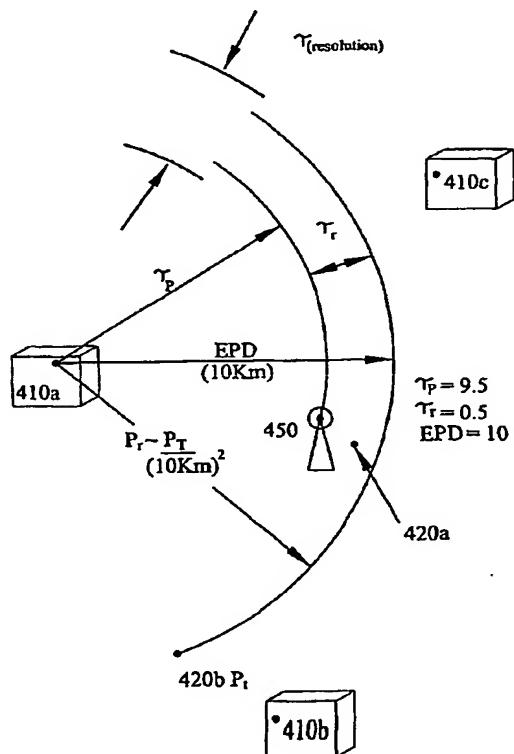
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(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),

[Continued on next page]

**(54) Title:** SYSTEM AND METHOD OF OPERATION FOR NETWORK OVERLAY GEOLOCATION SYSTEM WITH REPEATERS

**(57) Abstract:** A novel system and method for a network overlay geolocation system operating in a host wireless communication system with repeaters is disclosed. Embodiments of the novel system and method enable wireless communication system to determine if signals being received by system receivers arrive directly from a target mobile appliance or if the signals are passing through a repeater. The system's determination may be based at least in part on the TA of the signal, the power of the received signal, the power of the transmitted signal, the hearability of the signal at system receivers, the hearability of system transmitters at the mobile and the known delays associated with the repeaters. Embodiments of the novel system and method provide a more accurate geolocation of mobiles served by repeater stations than capable in the prior art.





European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(88) Date of publication of the international search report:  
2 February 2006

Published:

— with international search report

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**INTERNATIONAL SEARCH REPORT**

International application No.

PCT/US04/30781

**A. CLASSIFICATION OF SUBJECT MATTER**

IPC(7) : H04B 7/15; H04Q 7/20  
US CL : 455/11.1, 456.1

According to International Patent Classification (IPC) or to both national classification and IPC

**B. FIELDS SEARCHED**

Minimum documentation searched (classification system followed by classification symbols)  
U.S. : 455/11.1, 456.1

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)  
Eas'

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 2003/0,083,008 A1 (Baker et al.) 1 May 2003 (01.05.2003), par.0008, lines 1-16; par.0026, lines 22; par.0027, lines 1-11.	1, 8, 19, 26, 27
Y	US 6,501,955 B1 (Durrant et al.) 31 Dec.2002 (31.12.2002), column 3, lines 1-33; column 4, lines 31-38, column 6, lines 45-67, column 7, lines 14-19.	1-3, 6,8, 13, 18-20, 23-25 and 27
Y	US 2003/0,162,550 A1 (Kuwayahara et al.) 28 August 2003 (28.08.2003), par.0011, page 2, par. 0022, par. 0023, par. 0024.	1, 4,7, 16, 26
Y, T	US 2003/0,220,075 A1 (Baker et al.) 27 Nov. 2003 (27.11.2003), pages 2-5.	1, 8, 19, 26, 27
Y, T	US 2004/0,147,221 A1 (Sheynblat et al.) 29 Jul. 2004 (29.06.2004), pages 1-4	26-27

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Date of the actual completion of the international search 07 December 2004 (07.12.2004)	Date of mailing of the international search report 08 NOV 2005
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